REMARKS

Claims 1-5, 8-15 and 18-24 are pending. Claims 1-5, 8-15 and 18-24 are rejected. Claims 1-3, 9, 11-13, 19 and 22-24 are amended.

This Response is filed in reply to the Final Office Action dated April 21, 2004. Applicant's silence with regard to any of the Examiner's rejections should not be construed as acquiescence to any of the rejections. The amendments to the claims are being made solely to expedite the prosecution of the above-identified application. Applicant reserves the option to further prosecute the same or similar claims in the instant or subsequent patent applications. Upon entry of the Amendment, claims 1-5, 8-15 and 18-24 are pending in the present application.

Claims 1-5, 8-15 and 18-24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

Claims 1-5, 8-15 and 18-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hardwick (U.S. Patent No. 6,106,575) in view of Ball (U.S. Patent No. 5,615,357), and further in view of Tandri (U.S. Patent No. 6,341,371).

With respect to the rejection of claims 1-5, 8-15 and 18-24 under 35 U.S.C. 112, second paragraph, claims 1-3, 9, 11-13, 19 and 22-24 are amended to provide proper antecedent basis for the limitations of the claims and to clarify the Examiner's understanding of the claims. As such, the amendments do not narrow the scope of the limitations and serve to place the claims in better condition so as to expedite prosecution.

With respect to the rejection of claims 1-5, 8-15 and 18-24 under 35 U.S.C. 103(a), Applicant traverses the Examiner's rejection and respectfully requests reconsideration in view of the remarks and amendments herein.

The Examiner contends that Hardwick discloses detecting expressions and a trace file including data representing the expressions and indicating the sequence in which they

occur and enabling generation of source code corresponding to the expressions. However, as referenced by the Examiner, Hardwick describes divide-and-conquer algorithms that can be used to divide a problem into subproblems typically having the same nature as the overall problem (col. 3, lines 47-56; col. 8, lines 33-57; col. 10, lines 32-40). Hardwick further describes a preprocessor for converting nested parallel programs to C language code, or other sequential, imperative programming languages comprised of a list of program statements (col. 6, lines 41-59), and an alternative implementation using data-flow analysis to determine if a renaming optimization can be applied (col. 32, lines 44-61). Hardwick does not teach or suggest *generating a trace file*, and particularly does not teach or suggest *generating a trace file in response to detecting occurrences of expressions using self-tuning objects*, as recited by Applicant in claims 1, 11 and 22-24.

Rather, Hardwick describes a preprocessor for converting a program written in a nested parallel programming language to sequential programming code and calls to a message passing interface (MPI). The preprocessor implementation described by Hardwick is specifically designed for use with the divide-and-conquer algorithm. The conversion process does not include *generating a trace file in response to detecting occurrences of expressions using self-tuning objects*, and Hardwick does not mention the use of a trace file, as recited by Applicant. Listings of program statements, or MPI calls, or the use of data-flow analysis, as described by Hardwick, do not constitute Applicant's trace file.

The Examiner further contends that Ball discloses dividing a trace file into blocks during simulation and that incorporating the teaching of Ball to the method of Hardwick would be obvious. As described in the above remarks, Hardwick does not teach or suggest a trace file. Thus, there is no trace file in Hardwick for incorporating any teaching of Ball related to a trace file. In addition, the trace file described by Ball is a sequential list of each instruction performed in executing a benchmark program, such as would be used in debugging programs. Applicant, on the other hand, generates a trace file in response to detecting occurrences of expressions using self-tuning objects. Unlike the Ball trace file,

Applicant's trace file is not generated for each instruction, but rather is generated in response to the detection of occurrences of expressions that use self-tuning objects.

Additionally, Ball describes randomly sampling the trace file to produce small segments of contiguous trace instructions. As described by Ball, the total segments include only about 0.3% of the total trace file (col. 9, lines 58-60). On the other hand, dividing a trace file, as described by Applicant, includes separating the trace file into blocks. In keeping with the customary meaning of dividing, the total blocks include the total trace file. Thus, a small sampling of the sequential list of instructions performed in executing a benchmark program, as described by Ball, is not found comparable to dividing Applicant's trace file into trace file blocks.

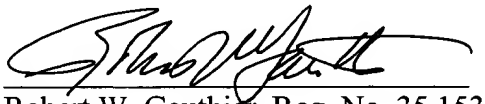
Applicant agrees with the Examiner that Tandri discloses the use of loop unrolling and loop blocking parameters. However, as recited by Applicant, the source code expression blocks are parameterized to *include at least one optimization parameter, the at least one optimization parameter being taken from parameters of self-tuning objects corresponding to entries in a trace file block from which said source code expression block was generated.* Tandri does not teach or suggest optimization parameters taken from the parameters of the self-tuning objects corresponding to entries in a trace file. As provided in the foregoing remarks, Hardwick does not teach or suggest, alone, or in combination with Ball, Applicant's trace file and trace file blocks. Thus, Applicant respectfully submits that there is no teaching, suggestion or motivation to combine the teachings in Hardwick, Ball and Tandri to obtain Applicant's methods and/or systems, as recited in independent claims 1, 11 and 22-24.

In view of the above remarks, Applicant respectfully suggests that independent claims 1, 11 and 22-24 are in condition for allowance, and allowance is requested. Claims 2-4, 5, 8 and 9 depend directly or indirectly from claim 1, and are allowable, at least by dependency. Similarly, claims 12-15 and 18-21 depend directly or indirectly from claim 11, and are allowable, at least by dependency.

CONCLUSION

On the basis of the foregoing Amendment and Remarks, this application is in condition for allowance. Accordingly, Applicant requests allowance.

Respectfully submitted,



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